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Patent

REMARKS

The undersigned Applicant's representative would like to thank Examiner Sisson for the productive personal interview held on August 15, 2001. As discussed during the interview, the amendments to the claims are supported by the passages listed by the Examiner in his Interview Summary. Furthermore, the claims are also supported by additional teaching in the specification including the numerous patents incorporated by reference. For example, the diagnostic device is also described in the specification on page 20, line 19 through page 22, line 10, where the specification teaches device fabrication including the use of glass or silica as substrates suitable for use with an external reader.

The specification has been amended, in accordance with the Examiner's comments, to correct the manner in which the sequence is referenced.

Pursuant to the above claim amendments, all pending claims are fully supported and allowable. Should there be any outstanding issues left, the Examiner is respectfully invited to call the undersigned attorney at the telephone number provided below.

Accordingly, all pending claims are now in condition for allowance and such action is respectfully requested. Please apply any charges or credits to Deposit Account No. 01-0431.

Respectfully submitted,

 8/17/01

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Appendix
Marked-Up Amendments to the Specification and Claims

In the Specification:

On page, 45 line 5, after "5'-GAGATGCGTCGGTGGCTG-3'" please insert: --(SEQ. ID 1) --

In the Claims:

Please amend claims 80, 83, 84, 93, 96 and 97 as follows:

80. (Twice Amended) A method of analyzing a sample in an integrated microfluidic device having at least two chambers in fluid communication, comprising:

- supplying the sample into a first chamber of the integrated microfluidic device, wherein the first chamber is selected from the group of chambers adapted to perform a preparative reaction, an analysis reaction including hybridization, sample acquisition, DNA extraction, amplification, IV transcription or labeling;
- performing a first reaction in the first chamber;
- moving the sample from the first chamber to the second chamber, wherein the second chamber is selected from the group of chambers adapted to perform a preparative reaction, an analysis reaction including hybridization, sample acquisition, DNA extraction, amplification, IV transcription or labeling;
- performing a second reaction in the second chamber, the second reaction being different from the first reaction; and
- performing confocal microscopy on the hybridized sample using a reader device;
- receiving a signal output from the reader device; and
- analyzing the signal output with a digital computer to indicate a property of the sample.

83. (Amended) The method of claim 82, wherein the size based analysis comprises microcapillary electrophoresis.

84. (Amended) The method of claim 80 [82], wherein the confocal microscopy [sequence based analysis comprises hybridization] includes detecting an optical signal from [of] fluorescently labeled targets located inside the device [to a nucleic acid array].

93. (Twice Amended) A method of analyzing a sample in an integrated microfluidic device having at least three chambers in fluid communication, comprising:
supplying the sample into a first chamber of the integrated microfluidic device, wherein the first chamber is selected from the group of chambers adapted to perform a preparative reaction, an analysis reaction including hybridization, sample acquisition, DNA extraction, amplification, IV transcription or labeling;
performing a first reaction in the first chamber;
moving the sample [from the first chamber] to the second chamber, wherein the second chamber is selected from the group of chambers adapted to perform a preparative reaction, an analysis reaction including hybridization, sample acquisition, DNA extraction, amplification, IV transcription or labeling;
performing a second reaction in the second chamber, the second reaction being different from the first reaction;
moving the sample [from the second chamber] to the third chamber, wherein the third chamber is selected from the group of chambers adapted to perform a preparative reaction, an analysis reaction including hybridization, sample acquisition, DNA extraction, amplification, IV transcription or labeling;
performing a third reaction in the third chamber, the third reaction being different from both the first and second reactions; [and]
performing confocal microscopy on the hybridized sample using a reader device receiving a signal output from the reader device; and
analyzing the signal output with a digital computer to indicate a property of the sample.

96. (Amended) The method of claim 95, wherein the size based analysis comprises microcapillary electrophoresis.

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97. (Amended) The method of claim 90 [95], wherein [sequence based analysis] the confocal microscopy comprises [hybridization] detecting an optical signal from fluorescently labeled [of] targets located inside the device [to a nucleic acid array].

**FAX**

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• **Comments:**

PLEASE DELIVER TO PRIMARY EXAMINER BRADLEY SISSON

Dear Examiner Sisson,

Attached is an Amendment responsive to your Office Communication of August 12, 2001 and the interview we conducted on August 15, 2001. I appreciated and enjoyed the opportunity to meet with you.

In the event that you wish to communicate further on this matter, I note that I will be on vacation from August 20-24. During that time, attorney Zitkovsky will be available (781-943-4012) should you wish to contact him. I will be in the office today (August 17) at 781-280-1712.

With kind regards,

Alan Sherr